

Revision Date 27-Jul-2016

WAI1 - AGHS - OSHA

Revision Number 6

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product Identifier**

Product Name Optimum Results™ F Reference Filling Solution
Product No 900046
Pure substance/mixture Mixture

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Use as laboratory reagent
Uses advised against No Information available

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Emergency Telephone 24 Hour Emergency Phone Number
CHEMTREC®
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: 1-703-527-3887
(collect calls accepted)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

Emergency Overview

Hazard Statements

Toxic to aquatic life with long lasting effects



The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Clear

Physical State Liquid

Odor None

Precautionary Statements

Prevention

Avoid release to the environment

Collect spillage

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No information available

Other Information

Toxic to aquatic life with long lasting effects

Harmful to aquatic organisms

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Water	7732-18-5	70 - 80%
Ammonium Sulfate	7783-20-2	20 - 30%
Sodium Chloride	7647-14-5	<0.1%
Silver Chloride	7783-90-6	<0.1%

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Remove and wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. Consult a physician. If breathing is irregular or stopped, administer artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Ingestion	Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do not induce vomiting.
Self-Protection of the First Aider	Use personal protective equipment.

Most important symptoms and effects, both acute and delayed

Most important symptoms and effects	No information available
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available

Specific Hazards Arising from the Chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Use personal protective equipment. For further specification, refer to section 8 of the SDS. Evacuate personnel to safe areas.
Environmental Precautions	Prevent entry into waterways, sewers, basements or confined areas. Do not flush into

surface water or sanitary sewer system. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Avoid contact with skin
No information available
Do not breathe dust
Do not take internally
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors)

Conditions for Safe Storage, Including any Incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place
Keep out of the reach of children

Incompatible Products No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product does not contain any known or suspected reproductive hazards.
Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face Protection Tightly fitting safety goggles.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection None under normal use conditions. In case of inadequate ventilation wear respiratory protection.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear
Odor None
Odor Threshold No information available
pH 6.4
PH Range 4.3 - 8.5

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point/freezing point	No information available	
Boiling Point/Range	~ 100 °C / 212 °F	
Flash Point (High in °C)	N/A	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	
Water Solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition Temperature	-	
Decomposition Temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density	No Information available
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No Information available

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Chemical Stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing

Conditions to Avoid

Extremes of temperature and direct sunlight

Incompatible Materials

No information available

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No information available
Eye Contact	No information available
Skin Contact	No information available
Ingestion	No information available

Information on Toxicological Effects

Symptoms No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available
Mutagenic Effects	No information available
Carcinogenicity	No information available.
Reproductive Effects	No information available
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Aspiration hazard	No information available

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 10923 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Ammonium Sulfate 7783-20-2	-	LC50: = 18 mg/L, 96h (Cyprinus carpio) LC50: 32.2 - 41.9 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 5.2 - 8.2 mg/L, 96h static (Oncorhynchus mykiss) LC50: > 100 mg/L, 96h (Pimephales promelas) LC50: 123 - 128 mg/L, 96h semi-static (Poecilia reticulata) LC50: = 126 mg/L, 96h (Poecilia reticulata) LC50: 460 - 1000 mg/L, 96h static (Leuciscus idus) LC50: = 420 mg/L, 96h semi-static (Brachydanio rerio) LC50: = 250 mg/L, 96h (Brachydanio rerio) LC50: = 480 mg/L, 96h flow-through (Brachydanio rerio)	EC50: = 423 mg/L, 24h (Daphnia magna) LC50: = 14 mg/L, 48h (Daphnia magna)

Sodium Chloride 7647-14-5	-	LC50: = 12946 mg/L, 96h static (Lepomis macrochirus) LC50: 6020 - 7070 mg/L, 96h static (Pimephales promelas) LC50: = 7050 mg/L, 96h semi-static (Pimephales promelas) LC50: 6420 - 6700 mg/L, 96h static (Pimephales promelas) LC50: 4747 - 7824 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 5560 - 6080 mg/L, 96h flow-through (Lepomis macrochirus)	EC50: 340.7 - 469.2 mg/L, 48h Static (Daphnia magna) EC50: = 1000 mg/L, 48h (Daphnia magna)
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Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available

Mobility

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Component	log Pow
Ammonium Sulfate 7783-20-2	-5.1

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Improper disposal or reuse of this container may be dangerous and illegal.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Component	CAWAST
Silver Chloride 7783-90-6	Toxic

14. TRANSPORT INFORMATION

DOT

UN-No	UN3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	9
Packing Group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
Shipping Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III
Emergency Response Guide Number	171

ICAO

UN-No	UN3082
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Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	9
Packing Group	III
Special Provisions	A97, A158, A197
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

IATA

UN-No	UN3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	9
Packing Group	III
ERG Code	9L
Special Provisions	A97, A158, A197
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

IMDG/IMO

UN-No	UN3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	9
Packing Group	III
EmS No.	F-A, S-F
Special Provisions	274, 335, 969
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver Chloride), 9, III, Marine Pollutant

15. REGULATORY INFORMATION

International Inventories

USINV	Complies
CANINV	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

USINV/ TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CANINV/ DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Silver Chloride 7783-90-6	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

No information available

16. OTHER INFORMATION

Prepared By Regulatory Affairs

Prepared For Thermo Fisher Scientific Inc.©

Issue Date No information available

Revision Date 27-Jul-2016

Reason for revision SDS sections updated.

Disclaimer

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End of Safety Data Sheet